

**Las Cruces Field Office**

**Riparian and Aquatic Habitat Management Plan**  
**and**  
**Environmental Impact Statement**

Record of Decision

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Date

Prepared by:  
U.S. Department of the Interior  
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Las Cruces Field Office  
New Mexico

## **DECISION**

To meet the ongoing need for long-term stewardship of riparian habitats, the Las Cruces Field Office will adopt the Preferred Alternative, described as Current Management, in the *Las Cruces Riparian and Aquatic Proposed Habitat Management Plan (HMP) and Final Environmental Impact Statement (FEIS)*. The HMP provides specific direction for restoring and protecting identified riparian habitats on lands under the jurisdiction of the Bureau of Land Management (BLM) in the Las Cruces Field Office. In addition, the HMP guidance will be applied to riparian habitats under BLM jurisdiction that are subsequently identified by the Las Cruces Field Office.

The Record of Decision for the Mimbres RMP (signed on April 30, 1993) recorded the acceptance of the RMP as the land use plan for the Mimbres Resource Area. The Las Cruces Field Office consists of two former Resource Areas that were eliminated in 1998 – the Mimbres Resource Area and the Caballo Resource Area. Public lands located in Doña Ana, Grant, Luna, and Hidalgo Counties are included in the Mimbres RMP. All references in this RMP to the Mimbres Resource Area and the Mimbres RMP apply specifically to the EIS area and decisions specified in this Record of Decision.

For over a decade, the BLM has emphasized the restoration and protection of riparian areas for the benefit of ecosystem and watershed integrity, unique plant associations, threatened and endangered species, and other riparian-dependent species in New Mexico. The Mimbres Resource Management Plan (RMP) provided a number of policy guidelines and planned actions for the enhancement and protection of riparian habitats within the Las Cruces Field Office. Current management practices and policies were used to develop a set of actions and time frames for updating the current riparian management activities in the Las Cruces Field Office. New data will be obtained from ongoing monitoring to determine the effectiveness of current management. The HMP also gives the public a set of published goals and objectives that the Las Cruces Field Office will use to develop future management actions and to judge the success of riparian stewardship.

## **ALTERNATIVES**

Three alternatives were presented in the *Draft Environmental Impact Statement for Riparian and Aquatic Habitat Management in the Las Cruces Field Office - New Mexico (DEIS)*: (1) Current Management, (2) Adaptive Management, and (3) Grazing Management. While all alternatives followed current regulatory and legal requirements and BLM policy guidance, each alternative provided a different approach, management strategy and set of implementation procedures for achieving riparian habitat stewardship. As a set, the three alternatives also addressed technical and policy issues developed in public scoping.

### **Current Management**

Under the Current Management Alternative (the No Action Alternative and the Preferred Alternative), the Las Cruces Field Office would continue to manage riparian areas in accordance with applicable BLM guidance and decisions from the Mimbres RMP with the objective of restoring and protecting riparian and aquatic ecosystems in context with authorizing other land management activities. This alternative is also the No Action Alternative required for NEPA analysis. Current management has already resulted in the restoration of some riparian areas by removing domestic livestock either completely or during the growing season, as well as by implementing other management practices.

Current management activities in the EIS portion of the Las Cruces Field Office are based on a set of plans and activities derived from those aspects of BLM policy and guidance for riparian-wetland area management that seek to protect riparian and aquatic habitats from potential adverse effects from other authorized uses of the land. Within the Las Cruces Field Office, the policy and guidance are usually applied in the form of stipulations or conditions of approval for other uses that are authorized for the public lands. For example livestock grazing may be limited by location, season of use, or numbers of animals to protect riparian habitats; mineral developers may be precluded from locating facilities in or adjacent to riparian areas; and utility rights-of-way may be excluded or required to avoid any activities that would impair riparian function. In addition, authorization for other uses of the land may require actions such as water development, vegetation manipulation, bank stabilization, or other measures to restore or protect aquatic and riparian habitats as a condition of approval. Finally, current management may also undertake actions specifically designed to restore or protect riparian habitats as a specific Las Cruces Field Office initiative. For example, field inventories have been conducted to determine the condition of riparian habitats, or specific vegetation control and management have been completed under the current budget priorities and staffing levels.

Fifteen resource management programs are identified in the Mimbres RMP, including a resource management program specifically directed at riparian and aquatic habitat. Resource management programs and activities that are relevant to an evaluation of current riparian management activities within the Mimbres RMP area include the following:

- The goal of the riparian management program is to achieve a healthy and productive ecological condition for public land riparian areas. The following are among the more notable continuing management guidance and actions for riparian areas as identified in the RMP:
  - Riparian areas will not be disposed of through sale or exchange unless such an action would be in the public interest.

- Suppression of wildfire in riparian habitats will have a high priority unless fire is a natural part of the ecosystem. Riparian areas that have burned will be rehabilitated as necessary through protection, reseeding, or planting.
  - Grazing management practices will be designed and established to meet riparian and water quality needs in the development of new allotment management plans (AMPs) and in the revision of existing AMPs. When management systems alone cannot meet objectives, provisions for fencing or other means of exclusion will be utilized. No livestock-related activities, such as salting, feeding, and construction of holding facilities and stock driveways will be allowed within riparian zones unless specifically authorized.
  - Construction activities that would remove or destroy riparian vegetation will be avoided.
  - Minerals management actions and special stipulations or conditions will be designed to be compatible with riparian habitat management goals. Riparian buffer zones will be identified and provided for in the exploration and development of mineral resources.
  - No vegetation treatments will be undertaken in the riparian areas using herbicides except for selected treatment of non-native species (e.g., saltcedar).
  - All new spring developments will be designed to protect riparian areas, while selected existing spring developments will be modified for the same reason.
  - Throughout the area, riparian habitat management will continue to be coordinated with other programs and activities as needed. Specific programs include range, wildlife, watershed, recreation, and lands. Riparian habitat values will be addressed in all surface- and vegetation-disturbing actions. Riparian areas will have a higher priority for funding, management, and protection than arroyo habitats.
- Although most of the public land in the portion of the Las Cruces Field Office area considered in this EIS is available for mineral entry, restrictions are in place on leasable, locatable, and salable mineral activities within selected areas. For example, all Areas of Critical Environmental Concern (ACECs) and Research Natural Areas (RNAs) are closed to fluid mineral leasing and to salable mineral activities, including those identified as containing riparian areas. In addition, the Apache Box and Organ/Franklin Mountains

ACECs have been petitioned for withdrawal from locatable mineral entry. Additional protection is afforded riparian areas and, therefore, adjacent aquatic areas by requiring that such areas will not be disturbed during locatable, salable, or leasable mineral entry on public land.

- The lands program seeks to facilitate the acquisition, exchange, or disposal of public land in order to provide the most efficient management of public resources. Riparian areas within ACECs and RNAs are protected from disposal and are excluded from development of new rights-of-way.
- The access program pursues ways to enhance access to and across public land in a manner that is compatible with the protection of sensitive resource values. The Mimbres RMP identified 19 areas where access was to be developed by building new roads, adjustment of land ownership, or acquisition of easements, including areas containing riparian habitat. Specifically, acquisition of legal public or administrative access is to be developed for the Cowboy Spring ACEC, Apache Box ACEC, Bear Creek ACEC, Cooke's Range ACEC, Florida Mountains ACEC, Gila Lower Box ACEC, Gila Middle Box ACEC, Little Hatchet Mountains, Organ Mountains ACEC, Owl Canyon, and Rockhouse Canyon.
- The livestock grazing program uses monitoring studies to monitor long-term rangeland ecological conditions and trends and to determine whether desired plant community goals are being attained. The Mimbres RMP calls for the establishment of monitoring studies on all allotments where conditions are deemed unsatisfactory and can be economically improved. The intensity and frequency of monitoring depends upon the initial conditions of the allotment. Allotments where conditions are unsatisfactory and can be economically improved are monitored at a greater intensity than allotments where conditions are currently satisfactory. If monitoring studies indicate a decline in condition, changes can be made in active grazing preferences or current livestock management practices. The livestock grazing program uses fencing to exclude cattle and spring development to provide water sources outside riparian areas when such actions are deemed appropriate.
- The vegetation management program develops activities to maintain a desired plant community that produces the kind, proportion, and amount of vegetation necessary for meeting or exceeding the land use plan goals and activity plan objectives established for each site. As presented in the Mimbres RMP (BLM 1993a), the desired plant community for riparian areas consists of 30-80% grass or grasslike species, 40-60% percent woody vegetation, and 30-60% forbs.
- The wildlife program endeavors to improve, enhance, and expand wildlife habitat on public land for both consumptive and nonconsumptive uses, as well as for maintaining biological

diversity. Before activities are authorized in riparian areas, consideration is given to avoiding or minimizing disturbance to wildlife within 500 feet of riparian areas throughout the year. In addition, new fences are built to allow for wildlife passage, and wildlife escape devices are installed on all new or existing water tanks or troughs within the Mimbres RMP area. The Gila Lower Box and the Gila Middle Box were designated as ACECs in order to protect special status wildlife species and riparian habitat.

- The recreation program develops projects to enhance opportunities for developed and undeveloped recreation on public land. Portions of some ACECs that contain many of the primary riparian areas and springs or seeps, as well as the Lordsburg Playa RNA, are closed to off-highway vehicle (OHV) use. Other management decisions that affect recreational use of riparian areas in ACECs include a ban on shooting in the Apache Box ACEC from February 1 to August 15 each year and closure of the Cooke's Range ACEC to fuelwood collection.
- The Wilderness Program entails management of 20 areas totaling approximately 500,000 acres to maintain natural conditions and ecosystem function. Riparian areas in the Apache Box, Blue Creek, Cooke's Range, Cowboy Spring, Florida Mountains, Gila Lower Box, Organ Mountains, Peloncillo Mountains (including Owl Canyon), and Uvas Mountains are mostly within wilderness study areas (WSAs).
- The special status species program gives priority to the protection and management of habitat for known populations of federal- or state-listed species, to prevent listing of federal candidate species, and to assist in the recovery of listed species. Management goals for special status species were included in the ACEC, designations for the Apache Box ACEC, Gila Lower Box ACEC, Gila Middle Box ACEC, and Organ/Franklin Mountains ACEC.

The Southwestern Willow Flycatcher Management Plan directs implementation of the "reasonable and prudent alternatives" in the Biological Opinion issued by the U.S. Fish and Wildlife Service on the Mimbres RMP, including:

- Elimination of a planned action to allow livestock to be used as a vegetation management tool in the Gila Lower Box ACEC;
- Development of maps that convey the location, size, shape, and spacing of habitat patches suitable for southwestern willow flycatcher;
- Prioritization of the areas to be surveyed for southwestern willow flycatcher;
- Surveys of occupied and potential habitat on public land in the Gila Lower Box ACEC;

- Monitoring of flycatcher nests to determine nest success and rates of nest parasitism by brown-headed cowbirds;
- Initiation of a trapping program for brown-headed cowbirds if nest parasitism reaches or exceeds 10% of a given year's southwestern willow flycatcher nests; and
- Identification of livestock concentrations within a 5-mile radius of occupied flycatcher habitat in order to identify likely foraging areas for brown-headed cowbirds.

The Placitas Arroyo Coordinated Management Plan was prepared to find ways to solve resource conflicts on Allotment No. 03064. Applicable stipulations in the management plan include:

- Site-specific threatened and endangered species and cultural clearances will be conducted for all surface-disturbing actions, as necessary, before implementation.
- The Placitas Arroyo CMP will be made a term and condition of the grazing permit. The plan may be amended or modified through the consultation of all parties concerned. The plan applies to base property, lessees, heirs, assignees, and transferees.
- There will be minimal clearance of vegetation along all pipelines and fences.
- No new roads will be constructed with the exception of a road on the pipeline route across the mesa. The road will be water barred where needed to reduce erosion.
- All storages and water troughs will be painted to blend into the surrounding vegetation type. All water troughs will be equipped with bird ramps.
- All fences are to be type "A" fences with all green posts. The wire spacing would be from the ground up 16, 6, 8 and then 12 inches. Total height is not to exceed 42 inches. The bottom wire would be smooth and the top barbed.
- The smaller exclosures, North Spring, Little Spring, and Middle Spring, will be closed to livestock grazing. The proposed North Spring expansion and the proposed Goat Spring exclosure will be open to grazing from October 1 through March 31 each year.

The Organ Mountains Coordinated Resource Management Plan addresses specific needs and actions for threatened and endangered species, wildlife habitat, rangeland resources, cultural resources, and recreation on BLM public land in the Organ Mountains. A number of guidelines are

provided for improving the management of riparian areas, including construction of trails outside riparian areas when possible, closing portions of land in the Organ Mountains to mineral entry, building exclosures and developing 12 springs and their associated riparian areas to exclude grazing by livestock, implementing grazing systems to provide growing season rest to riparian areas, and prohibiting overnight camping in back-country areas with riparian zones.

### **Adaptive Management**

Under the Adaptive Management Alternative, the Las Cruces Field Office would assign highest priority to implementing those management practices identified in current BLM management guidance to restore and protect all riparian habitats under BLM jurisdiction. This process would require a specific focus on riparian management, and decisions regarding other land management activities would be constrained to limit or prevent any adverse impact on riparian areas.

Implementation of adaptive management practices would involve the following procedures:

- (1) Survey and analyze riparian conditions;
- (2) Use survey results to describe a desired future condition and identify appropriate management actions;
- (3) Implement management actions;
- (4) Monitor the success of the management actions; and
- (5) Modify the management actions, if necessary, on the basis of the monitoring results.

The ordered sequence of these procedures describes an adaptive management approach that provides a means to change management activities when monitoring data show that current actions are no longer required or when current actions are not resulting in achievement of a desired restoration or enhancement goal outlined in item 2 above. A guiding principle is that all information is collected and analyzed to judge success in achieving (1) the endpoints associated with proper functioning condition and (2) a desired vegetation composition and structure. It should be noted that when best management practices are being implemented, the development of management actions is a decision outcome derived from the results of baseline riparian area surveys and analyses.

### **Grazing Management**

Under the Grazing Management Alternative, the Las Cruces Field Office would eliminate



grazing by domestic livestock in riparian areas within the EIS area by modifying grazing allotments to exclude riparian areas. For each allotment affected, this provision would include changing the description of the allotment, installing fences or other physical barriers to exclude livestock from riparian areas, and, if appropriate, adjusting the number of livestock permitted to use a modified allotment. This alternative, if selected, may require the amendment of the Mimbres RMP.

### **Preferred Alternative**

Following publication of the DEIS and analysis of all comments received, the Preferred Alternative, that is continuation of current management, was selected for implementation and is developed further in the FEIS. Current management has already resulted in the restoration of many riparian areas by removing and excluding domestic livestock either completely or during the growing season, by including stipulations for protecting and restoring riparian habitats when authorizing other land management activities, and by implementing riparian improvement projects. The HMP component of the FEIS presents a matrix of the current policies, actions, procedures, goals and objectives, and monitoring activities that the Las Cruces Field Office uses to implement the Preferred Alternative on each identified riparian area.

### **RATIONALE**

While each of the alternatives could be expected to accomplish the objective of protecting and restoring riparian habitats, the FEIS documents the successful operational implementation of the Preferred Alternative, Current Management. On the basis of the policies and guidance for riparian management developed in the Mimbres RMP, the HMP refines and updates past documentation under the Preferred Alternative. The updated information gives the Las Cruces Field Office a set of specific actions designed to continue the restoration and protection of the identified riparian areas. A monitoring program included in the HMP provides a quantitative schedule of surveys and data collection to determine progress and to indicate the need for any adjustments in management strategy to reach the desired objectives. The HMP enhances the probability that under the Current Management Alternative the desired riparian habitat objectives will be achieved while being consistent with the Mimbres RMP guidance.

Although the Adaptive Management Alternative provides opportunities for new program initiatives and improvement of ongoing business practices, during the National Environmental Policy Act (NEPA) process (including public scoping, documentation produced in the DEIS and FEIS, and public comments on the DEIS) it was clearly demonstrated that current, documented riparian management activities in the Las Cruces Field Office are achieving the desired future condition of restoration and protection of riparian areas. The HMP presented in the FEIS enables the public to better understand the underlying policies of current management and explicitly presents the site-specific actions currently underway in the field office. Thus, it was determined that the

Adaptive Management Alternative for the Las Cruces Field Office is not sufficiently different from current management to warrant its selection.

The Grazing Management Alternative would categorically exclude domestic livestock grazing in all riparian areas, but would otherwise rely on continuation of current management to accomplish riparian management objectives. The Grazing Management Alternative is highly prescriptive and continues the dependence of riparian management and riparian restoration on the outcome of other field office actions. In addition, the Las Cruces Field Office has already excluded domestic livestock grazing from most riparian areas.

## **PUBLIC COMMENTS ON THE PROPOSED PLAN**

The views of the public have been sought throughout the process of producing the Riparian and Aquatic Habitat Management Plan for the Las Cruces Field Office. Public involvement was initiated and documented in detail during public scoping, including open meetings held early in the scoping process. Public scoping was followed by an open house and public hearing on the Draft Environmental Impact Statement. The Proposed Riparian and Aquatic Habitat Management and Final Environmental Impact Statement was made available to the public as a printed document, as a digital document (CD-ROM) and placed on the BLM/New Mexico web site at [www.nm.blm.gov](http://www.nm.blm.gov). All individuals and organizations listed on the current Las Cruces Field Office mailing list for this project have been sent a copy of the Record of Decision to complete the public involvement process. No comments were received on the Proposed Riparian and Aquatic Habitat Management and Final Environmental Impact Statement in the Las Cruces Field Office-New Mexico.

## **SECTION 7 CONSULTATION UNDER THE ENDANGERED SPECIES ACT**

A letter of concurrence with the biological evaluation presented in the Final Environmental Impact Statement (Volume 1) was issued by the United States Fish and Wildlife Service (Service) on October 3, 2000. The BLM is committed to the following actions as agreed to in the Service letter dated October 3, 2000:

- Livestock monitoring will be supplied to the Service annually;
- The BLM will coordinate with the Service to ensure that potential southwestern willow flycatcher habitat is improved to a suitable condition and that suitable habitat is maintained;
- For the loach minnow and spikedace, the Mimbres RMP biological opinion required five years of population surveys. If labor and funding are available, surveys may continue beyond five years;

- For the Chiricahua leopard frog, the Field Office is currently funding a survey to locate existing populations. If they are detected on BLM-administered land, the BLM will monitor the site(s) and determine necessary management needs to protect and enhance habitat for this species; and
- The BLM will continue southwestern willow flycatcher surveys until the subspecies is delisted or the BLM receives concurrence from the Service that surveys are no longer necessary.

## **MITIGATION**

The Habitat Management Plan presents a set of procedures designed, in part, to mitigate the loss of riparian habitat values through the cumulative effects of past activities. The management strategies contained in the HMP are designed to avoid or minimize adverse environmental impacts as much as possible. The HMP places special emphasis on the protection and enhancement of riparian vegetation and habitat for threatened and endangered species. For example, restrictions on use activities in riparian areas that contain potential habitat for the southwestern willow flycatcher are designed to mitigate past actions that have degraded natural riparian vegetation. The FEIS documented significant improvement in southwestern willow flycatcher habitat on the basis of changes in use activities. Continued implementation of these mitigation actions should result in further improvement of riparian habitat.

Management actions described in Table 1, as well as those indicated from monitoring observations, will be implemented using the best available management practices, as described in Table 2. The management actions address the need to restore and maintain riparian ecosystem conditions. None of the management actions include tasks that could potentially degrade riparian conditions. In addition, ongoing monitoring enables the Las Cruces Field Office to proactively respond to changing conditions and mitigate unforeseen events.

## **MONITORING AND ENFORCEMENT**

Monitoring protocols are prescribed for each identified riparian area (Table 1), and adaptive management strategies are designed to adjust management actions to meet riparian habitat objectives. Similarly, monitoring will provide information relative to the effect of other use authorizations that may affect or alter riparian management objectives.

Generally, monitoring activities follow standard procedures outlined in BLM guidance manuals, including photopoints, green line surveys, proper functioning condition (PFC) surveys, and if suitable habitat is present, yearly threatened and endangered species surveys. All monitoring will

be conducted according to schedules that reflect the conditions currently found within individual riparian areas. Riparian areas that are currently classified as not in PFC will receive more frequent and intensive monitoring than areas that are at PFC and not threatened by other use activities. Riparian areas subject to seasonal grazing will be monitored to determine whether domestic livestock grazing is impacting riparian habitat.

## **CONCLUSION**

This Record of Decision constitutes the final BLM action on approving the EIS for Riparian and Aquatic Habitat Management in the Las Cruces Field Office - New Mexico. Copies of this Record of Decision are available on request from the BLM, Las Cruces Field Office, 1800 Marquess Street, Las Cruces, NM 88005-3371 or from the New Mexico State Office, Division of Resources, 1474 Rodeo Road, Santa Fe, NM 87505-1689.

**TABLE 1 Current and Planned Management Tasks for Each of the Riparian Areas Administered by the Las Cruces Field Office**

Riparian Area	Current Management Practices and Activities	Planned Management Practices and Activities	Scheduled Monitoring Actions
Apache Box	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. AMP completed. Excluded from livestock grazing.	Acquire private land to consolidate holdings.	Photopoints each year starting in 2001. PFC survey every 5 years starting in 2001.
Bear Creek	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Build additional fences in fiscal year 2000. Excluded from livestock grazing.	Build fences and exclude grazing in 2000.	Photopoints each year starting in 2001. PFC survey every 2 years starting in 2001. Aquatic survey every 2 years starting in 2001.
Blue Creek, Segment 1	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral sales.	Explore options for riparian enhancements.	Photopoints each year starting in 2001. PFC survey every 5 years starting in 2005.
Blue Creek, Segment 2	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales.	Explore options for riparian enhancements.	Photopoints each year starting in 2001. PFC survey every 5 years starting in 2005. Southwestern willow flycatcher survey each year starting in 2001.
Gila Lower Box, Upstream of Gap Fence	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Limited livestock use.	Conduct a macro-invertebrate survey. Annually re-evaluate effects of livestock use.	Photopoints each year starting in 2001. PFC survey every 5 years starting in 2005. Southwestern willow flycatcher survey each year starting in 2001. Aquatic survey each year starting in 2001.

**TABLE 1 (Cont.)**

Riparian Area	Current Management Practices and Activities	Planned Management Practices and Activities	Scheduled Monitoring Actions
Gila Lower Box, Nichols Area	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Livestock excluded from fenced portion of river bottom.	Maintain gap fence. Conduct a macro-invertebrate survey.	Photopoints each year starting in 2001. PFC survey every 5 years starting in 2005. Southwestern willow flycatcher survey each year starting in 2001. Aquatic survey each year starting in 2001.
Gila Lower Box, The Box	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Livestock excluded from fenced portion of river bottom. Acquire private land.	Maintain gap fence. Conduct a macro-invertebrate survey.	Photopoints each year starting in 2001. PFC survey every 5 years starting in 2005. Southwestern willow flycatcher survey each year starting in 2001. Aquatic survey each year starting in 2001.
Gila Lower Box, Downstream of the Box	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales.	In 2000 and 2001, build fences to exclude domestic livestock grazing on riparian public land.	Photopoints each year starting in 2001. PFC survey every 2 years starting in 2003. Aquatic survey each year starting in 2001. Annual southwestern willow flycatcher survey when habitat develops.
Gila Middle Box	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. No grazing. No recreational boating.	Conduct a macro-invertebrate survey in 2003.	PFC survey every 5 years starting in 2005. Aquatic survey each year starting in 2001.

**TABLE 1 (Cont.)**

Riparian Area	Current Management Practices and Activities	Planned Management Practices and Activities	Scheduled Monitoring Actions
Owl Canyon	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Livestock grazing excluded.	Maintain fences. Acquire legal public access.	PFC survey every 5 years starting in 2002.
Frying Pan Spring	Retain public lands. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Livestock grazing is limited by topography.	Develop AMP. Build an exclosure to protect the spring.	PFC survey every 5 years starting in 2001.
Moonshine Spring	Retain public lands. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Livestock grazing is limited by topography.	Develop an AMP. Build an exclosure to protect the spring.	PFC survey every 5 years starting in 2001.
Riley Spring	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Livestock grazing is limited by topography.	Develop an AMP. Determine riparian characteristics and functionality. Manage for PFC if there are riparian values.	PFC survey every 5 years starting in 2001.
Cowboy Spring	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales.	Develop an AMP. Determine riparian characteristics and functionality. Manage for PFC if there are riparian values.	PFC survey in 2001 and at 5-year intervals if riparian values are found.
Elephant Butte Canyon	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales.	Develop an AMP. Determine riparian characteristics and functionality. Manage for PFC if there are riparian values.	PFC survey in 2001 and at 5-year intervals if riparian values are found.

**TABLE 1 (Cont.)**

Riparian Area	Current Management Practices and Activities	Planned Management Practices and Activities	Scheduled Monitoring Actions
Lawhorn Canyon	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales.	Develop an AMP. Determine riparian characteristics and functionality. Manage for PFC if there are riparian values.	PFC survey in 2001 and at 5-year intervals if riparian values are found.
Indian Spring	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Livestock grazing is limited by topography.	In 2002, install a float valve in the trough to prevent overflow.	PFC survey every 5 years starting in 2003.
Byer Spring	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales.	In 2003, build an exclosure to protect the spring and install a float valve in the trough to prevent overflow.	PFC survey in 2004 and every 5 years starting in 2005.
Burnt Spring	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Livestock grazing is limited by topography.	In 2002, install a float in the trough to prevent overflow.	PFC survey every 5 years starting in 2005.
Grapevine Spring	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales.	NCP <sup>a</sup>	NCS <sup>b</sup>
Spring Canyon Seep	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Livestock grazing is prevented by topography.	NCP	NCS



**TABLE 1 (Cont.)**

Riparian Area	Current Management Practices and Activities	Planned Management Practices and Activities	Scheduled Monitoring Actions
Upper May Spring	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Livestock grazing is prevented by topography.	Determine riparian conditions and characteristics. Manage for PFC if riparian conditions exist.	NCS
South Canyon Spring	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales.	Determine riparian characteristics and functionality. Manage for PFC if there are riparian values.	NCS
Achenbach Canyon	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales.	Determine functionality and feasibility of management for riparian values, if present.	PFC survey in 2001 and at 5-year intervals if riparian values are found.
Cleophus Spring	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Maintain enclosure.	Photopoints each year starting in 2005. PFC survey every 5 years starting in 2005.
Aguirre Spring	Retain public lands. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Build fence to protect the spring from recreational visitors. Evaluate in 2002 to determine need for new management strategy.	PFC survey every 5 years starting in 2005.

**TABLE 1 (Cont.)**

Riparian Area	Current Management Practices and Activities	Planned Management Practices and Activities	Scheduled Monitoring Actions
Cox Development 1	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales.	In 2002, determine functionality and feasibility of management for riparian values, if present.	NCS
Cox Development 2 (Baylor Spring)	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from domestic livestock grazing.	In 2002, determine functioning conditions.	NCS
CRMP-W-20	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales.	In 2001, determine functionality and feasibility of management for riparian values, if present.	NCS
Telles Spring	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales.	In 2003, evaluate feasibility of exclosure or other actions to protect the spring and related cultural values.	PFC survey every 5 years starting in 2005.
Middle Spring	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Maintain exclosure fence.	PFC survey every 5 years starting in 2003.

**TABLE 1 (Cont.)**

Riparian Area	Current Management Practices and Activities	Planned Management Practices and Activities	Scheduled Monitoring Actions
Mine House Spring	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales.	Determine functionality and feasibility of management for riparian values, if present.	NCS
LaPointe Spring	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Maintain the fence.	Photopoints each year starting in 2001. PFC survey every 5 years starting in 2005.
Indian Hollow	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Livestock grazing occurs.	Monitor annually to determine if management is required.	PFC survey each year starting in 2001.
Sotol Creek	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales.	Determine functionality and feasibility of management for riparian values, if present.	PFC survey in 2002 and at 5-year intervals if riparian values are found.
Fillmore Canyon	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Move Dripping Springs fence to include Fillmore Canyon. Maintain the fence regularly.	PFC survey every 5 years starting in 2003.

**TABLE 1 (Cont.)**

Riparian Area	Current Management Practices and Activities	Planned Management Practices and Activities	Scheduled Monitoring Actions
Ice Canyon	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from domestic livestock grazing.	Determine functioning conditions in 2003.	NCS
Dripping Springs	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Determine functionality.	PFC survey every 5 years starting in 2001.
North Spring	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Maintain fences annually.	PFC survey every 5 years starting in 2003.
Middle Spring	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Maintain fences annually.	PFC survey every 5 years starting in 2003.
Little Spring	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Maintain fences annually.	PFC survey every 5 years starting in 2003.

**TABLE 1 (Cont.)**

Riparian Area	Current Management Practices and Activities	Planned Management Practices and Activities	Scheduled Monitoring Actions
Goat Spring	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Fence out all riparian areas to exclude them from livestock grazing.	PFC survey every 5 years starting in 2003.
South Spring	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Maintain enclosure annually.	PFC survey every 5 years starting in 2002.
Hackler Spring	Retain public land. Closed to vehicles. Closed to mineral entry. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Maintain enclosure annually.	PFC survey every 5 years starting in 2003.
Hole in the Wall	Currently grazed by livestock.	In 2003, build an enclosure around the spring and a pipeline from the spring to a trough for livestock.	Photopoints each year starting in 2003. PFC survey every 5 years starting in 2005.
Bobcat Spring	Currently grazed by livestock.	In 2003, build an enclosure around the spring and a pipeline from the spring to a trough for livestock.	Photopoints each year starting in 2003. PFC survey every 5 years starting in 2005.
Russel Mine Spring	Currently grazed by livestock.	By 2002, determine potential for riparian development and manage accordingly.	NCS

**TABLE 1 (Cont.)**

Riparian Area	Current Management Practices and Activities	Planned Management Practices and Activities	Scheduled Monitoring Actions
Livermore Spring	Currently grazed by livestock.	In 2003, build an exclosure around the spring and install a flow valve on trough to prevent dewatering.	Photopoints each year starting in 2003. PFC survey every 5 years starting in 2005.
Box Canyon	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Lightly grazed by livestock.	In 2005, evaluate the potential for riparian projects and implement actions based on the evaluation.	PFC survey every 5 years starting in 2005.
Nichols Spring	Retain public land. Closed to vehicles. Closed to mineral leasing. Closed to mineral sales. Excluded from livestock grazing.	Maintain the exclosure.	PFC survey every 5 years starting in 2005.
Rockhouse Spring	Currently grazed.	In 2002, determine the potential/feasibility of implementing management actions to attain PFC.	PFC survey every 5 years starting in 2005.
Lordsburg Playa	Retain public land. Closed to vehicles. Closed mineral leasing. Closed to mineral sales. AMP in place.	In 2005, implement a study to determine how playa lakes function in the desert and develop a management plan that ensures the development and maintenance of natural vegetation.	NCS

**TABLE 1 (Cont.)**

Riparian Area	Current Management Practices and Activities	Planned Management Practices and Activities	Scheduled Monitoring Actions
Isaack Lake	Retain public land. Closed to vehicles. Closed mineral leasing. Closed to mineral sales.	In 2005, implement a study to determine how playa lakes function in the desert and develop a management plan that ensures the development and maintenance of natural vegetation.	NCS
San Luis Lake	Retain public land. Closed to vehicles. Closed mineral leasing. Closed to mineral sales.	In 2005, implement a study to determine how playa lakes function in the desert and develop a management plan that ensures the development and maintenance of natural vegetation.	NCS

<sup>a</sup> NCP = no currently planned future management practices and activities.

<sup>b</sup> NCS = no currently scheduled future monitoring actions.

**TABLE 2 Riparian Area Management Practices**

Practice	Objective	Comment
Fencing	Isolate degraded habitats	Consider big-game migration, public access, beaver activity, falling trees, and vehicles
Prescribed burns	Modify vegetation communities	Primarily for upland areas; prudent use in areas of special concerns (e.g., endangered species)
Forestry practices	Improve woody vegetation communities	Cover or canopy manipulation of coniferous and deciduous stands, woody debris, and slash management
Vegetation plantings	Reestablish native communities	Cuttings work well for woody vegetation; insert below water table; seeding is generally done fall or spring; rake after application
Opportunities from mineral activities	Mitigate mineral exploitation effects	Reclaim to utilize beneficial runoff or drainage; riparian habitat development in association with evaporation ponds; water spreaders to direct runoff from road construction
Structures	Control erosion	Bank protection, gradient restoration, water energy-transfer structures, sediment traps, spring developments, removal or modification of channelization structures, etc.
Beaver complex cycling	Transform pioneer woody vegetation into riparian community	Cycling of beaver complexes; special management to maximize vegetation regrowth rates; maximize initial construction population followed by reductions for maintenance levels
Bank stabilization	Accelerate soil and water conservation efforts	Anchoring green trees (or discarded Christmas trees) into banks; log structures (10–12 in. diam) at base of bank; rock in wire baskets (gabions)
Recreation planning	Protect, manage, and improve habitats	Maintain visitor compliance; retain vegetation; locate sites outside of riparian areas; prohibit vehicles from uncontrolled stream access; plant dense vegetation to screen and reduce use of sensitive areas; install signs; designate sites within riparian areas
Road relocation, construction, and maintenance	Protect, manage, and improve habitats	Locate outside of riparian area; prohibit vehicles from leaving roads; install signs; minimize impact to streambank and vegetation; revegetate disturbed areas; design and maintain culverts to allow fish passage and free debris flow; haul waste material away
Public education	Provide information to public land users on protection methods	Develop environmental education and interpretative displays designed to direct visitor or user behavior in or adjacent to riparian areas



